

FIRE & BURN



Summary

Fire and burn injuries¹ are the second leading cause of injury hospitalization and the fifth leading cause of injury death for Washington children 0-4 years old. In Washington, wood stoves were the most commonly cited fire source in child deaths. A properly located and functioning smoke alarm was known to be present in only four out of 25 child fire deaths. A parent was supervising most of the children at the time of their deaths.²

Protecting small children from hot objects and liquids, installing and maintaining smoke alarms, eliminating potential fire hazards, and teaching children what to do when they hear a smoke alarm may prevent childhood injuries due to fire and burns.

REAL STORIES OF FIRES INVOLVING WASHINGTON CHILDREN

Amber, age 14, was awakened to a smoke alarm in the middle of the night. She got out of bed and noticed a fire burning in an unoccupied back bedroom. She immediately woke up her grandmother, who called 911 as they evacuated their mobile home. The smoke alarm had been installed about a year before, and probably saved their lives.

Ethan, a 3-year-old, perished in a house fire started by a space heater with a spliced cord and magazines stacked around the space heater. There was no working smoke alarm in the home.

Madison, age 4, died in a structural fire caused by an uncertified wood stove. She and her older sister were sleeping when the stove ignited the rest of the room. The teen was unable to rescue Madison in time. There was no smoke alarm in the home.

Justin, age 10, ran to tell his mother that there was smoke in the house. When the firefighters arrived the house was filled with smoke, there was a fire in the woodstove, and the fire alarms were sounding. Their fire alarm had been installed one month before this incident.

Michael, age 5, died in fire that began on the couch in his home. It was suspected that one of his siblings might have started the fire.

¹ Includes injuries due to fire, flames, hot objects, and substances (such as hot liquids and steam, caustics, and corrosives). Not included are burns from electric current, from exposure to radiation from infrared heaters and lamps or from ultraviolet light sources (e.g., sunburn), or from explosions of combustible material.

² Child death review teams define supervising as an adult being with the child; it does not imply anything about the quality of the supervision. So in a fire in the middle of the night when everyone was sleeping, the teams would say that the parents were supervising the child.

PREVENTION STRATEGIES FOR PARENTS & CAREGIVERS TO PREVENT FIRE INJURY *FIRE & BURN*

- Smoke alarms should be installed outside bedrooms and on every floor in every home. Maintain alarms by replacing batteries at least once a year, and replace alarms every 10 years or when needed.
- Plan and practice two escape routes out of each room of the house at various times of the day and night. Keep furniture and other heavy objects out of the way of doors and windows so they don't block an escape. Designate an outside meeting place so all members of the family can be accounted for quickly.
- Children should know the sound of the smoke alarm. When they hear it, teach them to:
 - Crawl low under smoke.
 - Touch doors before opening them. If the door is hot, use an alternative exit.
 - Never go back into a burning building.
 - "Stop, drop, and roll," if their clothes are on fire.
- Caregivers need to be aware that sleeping children through age 16 may not wake up to the sound of a smoke alarm. Children may need to be rescued if there is a fire while they are sleeping.
- Take children to the local fire station for a tour. Children will be able to see a firefighter in full gear and learn that he or she is someone who saves children – not someone to be afraid of or hide from.
- Keep matches, lighters, and other heat sources out of children's reach.
- Keep flammable items such as clothing, furniture, newspapers, and magazines away from the fireplace, heater, and radiator.
- Avoid plugging several appliance cords into the same electrical socket.
- Replace old or frayed electrical wires and appliance cords, and keep all electrical wires on top of, not beneath, rugs.
- Store all flammable liquids such as gasoline outside of the home.

PREVENTION STRATEGIES FOR COMMUNITIES TO PREVENT FIRE INJURY *FIRE & BURN*

- Provide free smoke alarms to families in need and provide education to families about fire prevention, smoke alarm installation and maintenance, and the importance of escape plans.
- Educate children and caregivers about fire safety and burn prevention.
- Incorporate firefighters into community coalitions.
- Support comprehensive laws requiring smoke alarms in both new and existing dwellings (RCW 48.48.140) and rental owners to notify their tenants about the fire protection features of their building (RCW 59.18.060).

PREVENTION STRATEGIES FOR PARENTS & CAREGIVERS TO PREVENT BURN INJURY *FIRE & BURN*

- Always check bath water for "hot spots" by moving your hand back and forth through the water.
- Keep hot foods and liquids away from babies and young children.
- Set aside hot drinks before picking up or holding a child.
- Supervise children at all times while they are in the kitchen.
- Use the back burners on the stove and turn pot handles toward the back of the stove. It is very important that pot handles not extend over the edge of the stove where a child could reach them and pull the pot over, resulting in a serious scald burn.
- Hot food and beverages should be kept away from the edge of counters and tables so that children cannot reach them. Appliance cords, placemats, and tablecloths also must be kept out of reach to prevent children from pulling hot items down on themselves.
- Use safety gates around wood and gas stoves and fireplaces to prevent young children from getting too close.

Number of Injuries³

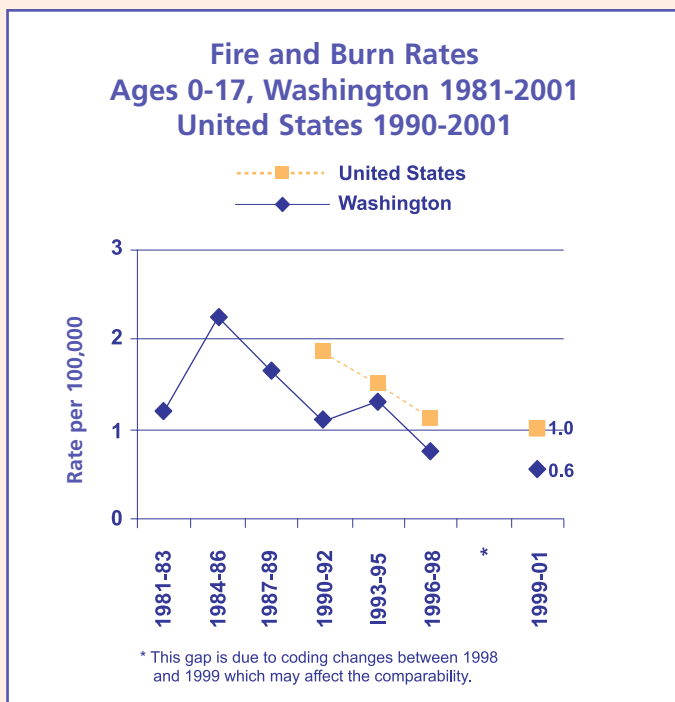
During 1999-2001, injuries due to fire and burns were the second leading cause of injury hospitalization and the fifth leading cause of injury death for Washington children 0-4 years old. For Washington children 0-17 years old, injuries due to fire and burns account for an annual average of:

- 9 deaths.
- 163 hospitalizations.
- About 3,320 visits to a hospital emergency department.

Time Trends⁴

From the three-year time period of 1981-83 to 1999-2001, there was a statistically significant decline in the death rates due to fire and burns for Washington children 0-17 years old, from 1.2 to 0.6 per 100,000. This represents about a 53 percent decrease in the fire and burn death rate.

Since 1990⁵, Washington death rates due to fire and burns have been lower than those nationally. There has also been a statistically significant decline in national rates since 1990.



³ Unless otherwise specified, data are for fire and burn injuries among children 0-17 years old during 1999-2001, except in the age and gender section, which is for 1997-2001. Rates are per 100,000 children who are Washington residents.

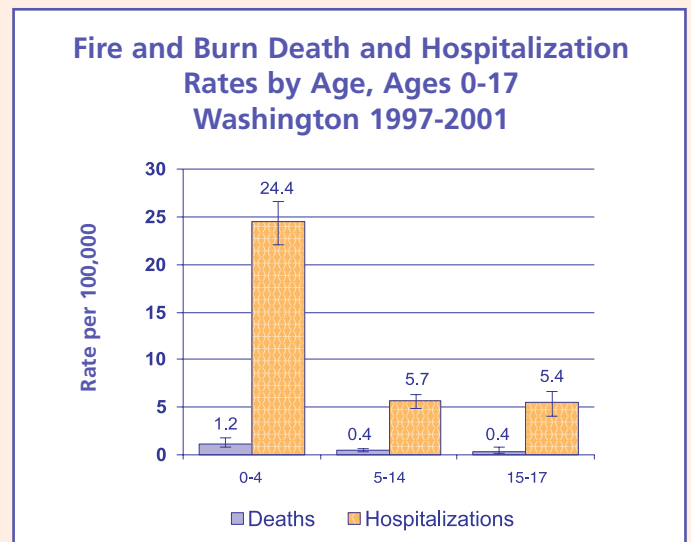
Intent

The majority of deaths due to fire and burns (96 percent) and hospitalizations (97 percent) among Washington children 0-17 years old were unintentional.

Age and Gender

During 1997-2001, the highest death and hospitalization rates due to fire and burns in Washington were among those 0-4 years old.

There was not a significant difference between males and females in the death rate due to fire and burns.



Male children had a fire and burn hospitalization rate that was 1.7 times higher than females.

⁴ See Comparability Ratio section in Appendix D.

⁵ National injury death rates for children 0-17 years old are not available prior to 1990.

CIRCUMSTANCES SURROUNDING DEATHS FROM WASHINGTON CHILD DEATH REVIEW DATA

Local child death review teams reviewed all of the 26 deaths due to fire and burns during 1999-2001. Key findings include:

- A wood stove was the most commonly cited fire or burn source, followed by candles and matches. The fire or burn source was unknown in one-fourth of the deaths.
- Twenty-one of the fire deaths (81 percent) occurred in the child's home, and 19 (73 percent) occurred between the hours of 9 p.m. and 6 a.m.
- In four of the deaths (15 percent), there was a suspicion that a child had started the fire either intentionally or by playing with something flammable.
- A properly located, working smoke alarm was known to be present in only four of the 25 (16 percent) fire-related deaths that occurred in a building.
- Of the 25 fire-related building deaths, none of the families were known to have had a fire escape plan.
- Impairment by or use of alcohol and/or other drugs was noted in four of the 26 deaths (16 percent); in three deaths (11 percent) the youth was impaired, and in three deaths (11 percent) the supervising adult was impaired.⁶
- A parent was supervising 17 of the 26 children (65 percent) at the time of their deaths.⁷
- Teams concluded that 91 percent of the 26 fire and burn deaths were preventable, 4 percent were not preventable, and the teams were unable to determine preventability for 4 percent.

⁶ Persons impaired may total more than the number of deaths because more than one party could have been impaired.

⁷ Child death review teams define supervising as an adult being

with the child; it does not imply anything about the quality of the supervision. So in a fire in the middle of the night when everyone was sleeping, the teams would say that the parents were supervising the child.